Journal of Testing and Evaluation
Author Index
Volume 29, 2001

Number	Month of Issue	Pages
1	January	1–112
2	March	115–227
3	May	229–311
4	July	315–422
5	September	423–511
6	November	513–588

A

Alavi, SH: *see* Papagiannakis, AT, Johnston, EC, Alavi, SH, and Mactutis, JA

Alawi, H: *see* Ragab, AR and Alawi, H

Ashbridge, MJ: *see* Gilmour, KR, Leacock, AG, and Ashbridge, MJ

B

Bakker, A: *see* van Gorp, AC, Mussert, KM, Janssen, M, Bakker, A, and van der Zwaag, S

Bar-On, I: *see* Grendahl, S, Bert, R, Cho, K, and Bar-On, I

Basáez, F: *see* Donoso, JR, Basáez, F, and Landes, JD

Becker, R: *see* Hattis, DB and Becker, R

Benguediab, M, Mazari, M, and Ranganathan, N: Determination of the Energy Necessary for Creating Fatigue Cracks by Measurement of Microhardness, Sept., 492

Bert, R: *see* Grendahl, S, Bert, R, Cho, K, and Bar-On, I

Bettou, T: *see* Yoshida, N, Bettou, T, and Wakita, M

Beynon, JH: *see* Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM

Bhat, TB: *see* Singh, BB and Bhat, TB

Boivin, WS: *see* Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF

Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR: Service Temperature Characterization of Polytetrafluoroethylene-Based Gaskets, Sept., 442

Boyd, SM: *see* Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF
see Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA

Britton, PW: Method-Specific Precision and Bias Relationships Developed from Data Submitted During USEPA Drinking Water Laboratory Performance Evaluation Studies, Jan., 79

Brookfield, DJ: *see* Li, W, Hellen, TK, Brookfield, DJ, Mottershead, JE, and Whelan, M

Burgess, G: *see* Singh, SP, Burgess, G, Pratheepthinthong, S, and Singh, J

Burgess, GJ: *see* Singh, SP, Burgess, GJ, and Hays, ZG

Bushar, HF: *see* Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF

C

Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM: Accurate Measurement of Flow Stress Curves at High Temperatures for Low Strain Ranges, Nov., 520

Chaput, MP and Margolin, AB: Evaluation of Powdered Latex Medical Gloves Using ASTM D 6124-00, Nov., 579

Chaput, MP: *see* Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA

Chen, H-J: *see* Chen, J-S, Shiah, M-S, and Chen, H-J

Chen, J: *see* Zhou, L, Chen, J, and Zhou, X

Chen, J-S, Shiah, M-S, and Chen, H-J: Quantification of Coarse Aggregate Shape and its Effect on Engineering Properties of Hot-Mix Asphalt Mixtures, Nov., 513

Cho, K: *see* Grendahl, S, Bert, R, Cho, K, and Bar-On, I

Chui, YH: *see* Li, Y and Chui, YH

D

Daigle, R: *see* Turcot, D and Daigle, R

Dalle Donne, C and Pirondi, A: *J*-Integral Evaluation of Single-Edge Notched Specimens under Mixed-Mode I/II Loading, May, 239

Davies, LM: *see* Sevini, F, Debarberis, L, Törrönen, K, and Davies, LM

Debarberis, L: *see* Sevini, F, Debarberis, L, Törrönen, K, and Davies, LM

Derenne, M: *see* Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR

Divinsky, M and Livneh, M: Homogeneous Unit Delineation for Interpreting Dynamic Cone Penetrometer Measurements, Sept., 503

Dobeš, F and Milicka, K: Small Punch Testing in Creep Conditions, Jan., 31

Donoso, JR, Basáez, F, and Landes, JD: The Calibration Functions of the Arc-Shaped Bend Specimen, July, 393

Dougherty, BP: *see* Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP

E

Edan, Y: *see* Pasternak, H, Schmilovitch, Z, Fallik, E, and Edan, Y

F

Fallik, E: *see* Pasternak, H, Schmilovitch, Z, Fallik, E, and Edan, Y

Fett, T, Munz, D, and Thun, G: Test Devices for Strength Measurements of Bars Under Contact Loading, Jan., 1

Fields, R: *see* Shepherd, D, Hagwood, C, and Fields, R

© 2001 by the American Society for Testing and Materials

Filliben, JJ: *see* Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP

Fukuda, K: *see* Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M

G

Galevi, EA: *see* Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA

Gegner, J and Öchsner, A: A Powerful New Tool for Testing Adhesives In Situ, March, 155

Gilmour, KR, Leacock, AG, and Ashbridge, MJ: The Determination of the In-Plane Shear Characteristics of Aluminum Alloys, March, 131

Gomez, JT and Shukla, A: Static and Dynamic Behavior of Damaged Concrete and Granite in Compression, Nov., 563

Gomi, K: *see* Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M

Grendahl, S, Bert, R, Cho, K, and Bar-On, I: The Effects of Residual Stress, Loading, and Crack Geometry on SEPB Fracture Toughness Test Results, May, 271

Gupta, AK: *see* Singh, DN and Gupta, AK

H

Hagwood, C: *see* Shepherd, D, Hagwood, C, and Fields, R

Hamilton, SL: *see* Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF

Hand, AJ, Mondal, AK, and Ward, DR: A Performance Evaluation of Lightweight Non-Contact Pavement Profilers, March, 161

Hattis, DB and Becker, R: Comparison of the Systems Approach and the Nordic Model and their Melded Application in the Development of Performance-Based Building Codes and Standards, July, 413

Hays, ZG: *see* Singh, SP, Burgess, GJ, and Hays, ZG

Hellen, TK: *see* Li, W, Hellen, TK, Brookfield, DJ, Mottershead, JE, and Whelan, M

Henry, JP: *see* Raffard, D, Ienny, P, and Henry, JP

Hu, XZ: *see* Wong, YK, Hu, XZ, and Norton, MP

Huang, H: *see* Yang, C, Huang, H, Tomblin, JS, and Oplinger, DW

I

Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M: Yield Strength in Relation to Cyclic Loading, Nov., 529

Ienny, P: *see* Raffard, D, Ienny, P, and Henry, JP

J

Janssen, M: *see* van Gorp, AC, Mussert, KM, Janssen, M, Bakker, A, and van der Zwaag, S

Javidrad, F and Mashadi, MM: A Finite Element Investigation into the Effect of a Skew Insert in a Double-Cantilever Beam Specimen on Calculating Mode I Delamination Fracture Energy of Unidirectional Composites, March, 199

Johnston, EC: *see* Papagiannakis, AT, Johnston, EC, Alavi, SH, and Mactutis, JA

Joyce, JA: Analysis of a High Rate Round Robin Based on Proposed Annexes to ASTM E 1820, July, 329

K

Kaloush, KE, Mirza, MW, Uzan, J, and Witczak, MW: Specimen Instrumentation Techniques for Permanent Deformation Testing of Asphalt Mixtures, Sept., 423

Kalyoncuoglu, SF: *see* Tigdemir, M, Karashin, M, and Kalyoncuoglu, SF

Karashin, M: *see* Tigdemir, M, Karashin, M, and Kalyoncuoglu, SF

Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF: Comparison of ISO/FDA and ASTM Condom Water Leak Test Methods, March, 192

Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA: Characterization and Creation of Defects in Condoms, March, 214

Kibble, KA: *see* Turner, D and Kibble, KA

Kim, Y-J and Schwalbe, K-H: On Experimental *J* Estimation Equations Based on CMOD for SE(B) Specimens, Jan., 67

Kim, Y-J and Schwalbe, K-H: On the Sensitivity of *J* Estimation to Materials' Stress-Strain Curves in Fracture Toughness Testing Using the Finite Element Method, Jan., 18

Krishna, KC: *see* Pandian, NS, Krishna, KC, and Sridharan, A

Kuriyan, SJ: *see* Singh, DN, Kuriyan, SJ, and Madhuri, V

L

Lacey, AJ: *see* Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM

Lai, MO: *see* Tronskar, JP, Mannan, MA, and Lai, MO

Landes, JD: *see* Donoso, JR, Basáez, F, and Landes, JD

Larsson, P-L: *see* ÖBerg, H, Larsson, P-L, and Magnius, O

Leacock, AG: *see* Gilmour, KR, Leacock, AG, and Ashbridge, MJ

Li, W, Hellen, TK, Brookfield, DJ, Mottershead, JE, and Whelan, M: Sensitivity Analysis of the Small Specimen Bulge Test by the Finite Element and the Taguchi Methods, May, 277

Li, Y and Chui, YH: Empirical Models Depicting Grain Angle Effects on Load-Embedment Response of Dowel-Type Fasteners in Wood, May, 264

Livneh, M: *see* Divinsky, M and Livneh, M

M

Mactutis, JA: *see* Papagiannakis, AT, Johnston, EC, Alavi, SH, and Mactutis, JA

Madhuri, V: *see* Singh, DN, Kuriyan, SJ, and Madhuri, V

Magnius, O: *see* ÖBerg, H, Larsson, P-L, and Magnius, O

Mailhot, SA: *see* Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF

Mannan, MA: *see* Tronskar, JP, Mannan, MA, and Lai, MO

Mannan, SL: *see* Sreenivasan, PR, Ray, SK, and Mannan, SL

Maragakis, M: *see* Meis, R, Maragakis, M, and Siddharthan, R

Marchand, L: *see* Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR

Margolin, AB: *see* Chaput, MP and Margolin, AB

Martinez-Fuentes, V: *see* Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP

Mashadi, MM: *see* Javidrad, F and Mashadi, MM

Mazari, M: *see* Benguediab, M, Mazari, M, and Ranganathan, N

Meis, R, Maragakis, M, and Siddharthan, R: Static Axial Behavior of Some Typical Restrained Pipe Joints, Sept., 485

Milicka, K: *see* Dobeš, F and Milicka, K

Millward, PA: *see* Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA

Mirza, MW: *see* Kaloush, KE, Mirza, MW, Uzan, J, and Witczak, MW

Mondal, AK: *see* Hand, AJ, Mondal, AK, and Ward, DR

Moran, AL: *see* Osborne, MC and Moran, AL

Mottershead, JE: *see* Li, W, Hellen, TK, Brookfield, DJ, Mottershead, JE, and Whelan, M

Munz, D: *see* Fett, T, Munz, D, and Thun, G

Mussert, KM: *see* van Gorp, AC, Mussert, KM, Janssen, M, Bakker, A, and van der Zwaag, S

N

Naundorf, G: *see* Ossadnik, S, Naundorf, G, and Schwedt, G

Nelson, JW: *see* Stroup-Gardiner, M and Nelson, JW

Norton, MP: *see* Wong, YK, Hu, XZ, and Norton, MP

O

ÖBerg, H, Larsson, P-L, and Magnius, O: An Instrumented Microindentation Testing Device, Jan., 50

Öchsner, A: *see* Gegner, J and Öchsner, A

O'Malley, LG: *see* Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF

Oplinger, DW: *see* Yang, C, Huang, H, Tomblin, JS, and Oplinger, DW

Osborne, MC and Moran, AL: Stress Pattern Analysis by Thermal Emission of Plain Weave Carbon Fiber/Epoxy Resin Composite Iosipescu Specimens with Three Different Notch Angles, Sept., 453

Ossadnik, S, Naundorf, G, and Schwedt, G: Determination and Calculational Minimization of the Nonlinearity of a Vis-NIR-Spectrophotometer Using the Double Aperture Method, July, 407

Ozkan, HE: *see* Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO

P

Pandian, NS, Krishna, KC, and Sridharan, A: California Bearing Ratio Behavior of Soil/Fly Ash Mixtures, March, 220

Pandian, NS, Sridharan, A, and Rajasekhar, C: Heavy Metal Retention Behavior of Clayey Soils, July, 361

Papagiannakis, AT, Johnston, EC, Alavi, SH, and Mactutis, JA: Laboratory and Field Evaluation of Piezoelectric Wegh-In Motion Sensors, Nov., 535

Papritan, JC: *see* Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO

Pasternak, H, Schmilovitch, Z, Fallik, E, and Edan, Y: Overcoming Multicollinearity in Near Infrared Analysis for Lycopene Content Estimation in Tomatoes by Using Ridge Regression, Jan., 60

Payne, JR: *see* Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR

Pierdominici, Jr., VJB: *see* Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF

Pirondi, A: *see* Dalle Donne, C and Pirondi, A

Pratheepthinthong, S: *see* Singh, SP, Burgess, G, Pratheepthinthong, S, and Singh, J

Pu, J: *see* Zhang, J, Pu, J, Zhang, M, and Qiu, T

Puttaswamygowda, G: *see* Srinivasan, R and Puttaswamygowda, G

Q

Qiu, T: *see* Zhang, J, Pu, J, Zhang, M, and Qiu, T

R

Raffard, D, Ienny, P, and Henry, JP: Displacement and Strain Fields at a Stone/Mortar Interface by Digital Image Processing, March, 115

Ragab, AR and Alawi, H: Weathering Effects on the Fracture Properties of Polyvinyl Chloride Pipes, Jan., 44

Rajasekhar, C: *see* Pandian, NS, Sridharan, A, and Rajasekhar, C

Ranganathan, N: *see* Benguediab, M, Mazari, M, and Ranganathan, N

Rao, C, Tutumluer, E, and Stefanski, JA: Coarse Aggregate Shape and Size Properties Using a New Image Analyzer, Sept., 461

Ray, SK: *see* Sreenivasan, PR, Ray, SK, and Mannan, SL

Romero, P: *see* Shenoy, A and Romero, P

Rushforth, RJ: Review of Design Experiments Using the Taguchi Approach: 16 Steps to Product and Process Improvement, Nov., 588

S

Sano, M: *see* Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M

Schmilovitch, Z: *see* Pasternak, H, Schmilovitch, Z, Fallik, E, and Edan, Y

Schwalbe, K-H: *see* Kim, Y-J and Schwalbe, K-H

Schwedt, G: *see* Ossadnik, S, Naundorf, G, and Schwedt, G

Sellars, CM: *see* Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM

Sevini, F, Debarberis, L, Törrönen, K, and Davies, LM: The AMES Network Strategy Developments in the 5th Euratom Framework Program, May, 306

Shenoy, A and Romero, P: Superpave Shear Tester as a Simple Standardized Measure to Evaluate Aggregate-Asphalt Mixture Performance, Sept., 472

Shepherd, D, Hagwood, C, and Fields, R: Evaluation of the Elevated Temperature Creep Strength of Three Lead-Free Solder Alloys in Soldered Joints, July, 380

Shiah, M-S: *see* Chen, J-S, Shiah, M-S, and Chen, H-J

Shukla, A: *see* Gomez, JT and Shukla, A

Siddharthan, R: *see* Meis, R, Maragakis, M, and Siddharthan, R

Singh, BB and Bhat, TB: A Screening Method for Ballistic Evaluation of Metallic Armor Materials, Sept., 509

Singh, DN and Gupta, AK: Falling Head Hydraulic Conductivity Tests in a Geotechnical Centrifuge, May, 258

Singh, DN, Kuriyan, SJ, and Madhuri, V: Nondestructive Evaluation of Fatigue and Creep-Fatigue Damage in 12%Cr Stainless Steel by the Induced Current Focusing Potential Drop Technique, Nov., 544

Singh, DN, Kuriyan, SJ, and Madhuri, V: Application of a Geotechnical Centrifuge for Estimation of Unsaturated Soil Hydraulic Conductivity, Nov., 556

Singh, J: *see* Singh, SP, Burgess, G, Pratheepthinthong, S, and Singh, J

Singh, SP, Burgess, GJ, and Hays, ZG: Measurement and Analysis of the United Parcel Service Ground Shipping Environment for Large and Heavy Packages, Jan., 11

Singh, SP and Sittipod, S: Effects of Recording Parameters on Power Density Spectra in Transport Vibration Measurement, March, 173

Singh, SP, Burgess, G, Pratheepthinthong, S, and Singh, J: Packaging Specifications for Corrugated Boxes with Heavy Flowable Products in Single Parcel Shipments, Nov., 570

Sittipod, S: *see* Singh, SP and Sittipod, S

Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO: A New Multiparameter Approach to the Prediction of Wear Rates in Agricultural Sprayer Nozzles, July, 372

Soboyejo, WO: *see* Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO

Sreenivasan, PR, Ray, SK, and Mannan, SL: Expression for the Dynamic Yield Stress from Instrumented Dynamic Tear Specimens and Plastic η-Factor for Three-Point Bend Specimens: Results for AISI 308 Weld and AISI 316 Stainless Steels, Sept., 499

Sridharan, A:
see Pandian, NS, Krishna, KC, and Sridharan, A
see Pandian, NS, Sridharan, A, and Rajasekhar, C
see Pandian, NS, Krishna, KC, and Sridharan, A
see Pandian, NS, Sridharan, A, and Rajasekhar, C

Srinivasan, R and Puttaswamygowda, G: A New Method for Testing the Abrasive Properties of Paper and other Sheet Metals, Jan., 72

Stefanski, JA: *see* Rao, C, Tutumluer, E, and Stefanski, JA

Stroup-Gardiner, M and Nelson, JW: Use of *n*-Propyl Bromide Solvents for Extraction and Recovery of Asphalt Cements, Sept., 432

T

Taniuchi, K: *see* Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M

Thun, G: *see* Fett, T, Munz, D, and Thun, G

Tigdemir, M, Karashin, M, and Kalyoncuoglu, SF: Development of New Low-Cost Indirect Tensile Test Equipment for Bituminous Mixtures, July, 387

Tomblin, JS: *see* Yang, C, Huang, H, Tomblin, JS, and Oplinger, DW

Tong, J: Notes on Direct Current Potential Drop Calibration for Crack Growth in Compact Tension Specimens, July, 402

Törrönen, K: *see* Sevini, F, Debarberis, L, Törrönen, K, and Davies, LM

Tronskar, JP, Mannan, MA, and Lai, MO: Direct Measurement of Displacement in Instrumented Charpy Impact Testing for Structural Integrity Assessment, May, 246

Turcot, D and Daigle, R: Test Method Using Energy to Evaluate the Cut Resistance of Protective Clothing Against Chain Saws, March, 123

Turner, D and Kibble, KA: A Finite Element Analysis of the Stress Intensity Resulting from Single-Edge Precracked Beam Loading Conditions, May, 285

Tutumluer, E: *see* Rao, C, Tutumluer, E, and Stefanski, JA

U

Uzan, J: *see* Kaloush, KE, Mirza, MW, Uzan, J, and Witczak, MW

V

van der Zwaag, S: *see* van Gorp, AC, Mussert, KM, Janssen, M, Bakker, A, and van der Zwaag, S

van Gorp, AC, Mussert, KM, Janssen, M, Bakker, A, and van der Zwaag, S: A Critical Appraisal of Fracture Toughness Measurements on AA6061 and an Al_2O_3-Particle Reinforced AA6061 Alloy for Various Heat Treatments, March, 146

Vangi, D: Ultrasonic Technique for Experimental Evaluation of Structural Integrity, May, 301

W

Wakita, M: *see* Yoshida, N, Bettou, T, and Wakita, M

Ward, DR: *see* Hand, AJ, Mondal, AK, and Ward, DR

Whelan, M: *see* Li, W, Hellen, TK, Brookfield, DJ, Mottershead, JE, and Whelan, M

Windelberg, D: Geometry of Solidification. I: Shrinkage Criterion Using Results from Finite Element Analysis, July, 352

Witczak, MW: *see* Kaloush, KE, Mirza, MW, Uzan, J, and Witczak, MW

Wong, YK, Hu, XZ, and Norton, MP: Low and High Cycle Fatigue Interaction in 316L Stainless Steel, March, 138

Y

Yang, C, Huang, H, Tomblin, JS, and Oplinger, DW: Evaluation and Adjustments for ASTM D 5656 Standard Test Method for Thick-Adherend Metal Lap-Shear Joints for Determination of the Stress-Strain Behavior of Adhesives in Shear by Tension Loading, Jan., 36

Yoshida, N, Bettou, T, and Wakita, M: Formation of Shear Bands in Model Ground Composed of Aluminum Rods Beneath a Footing, May, 229

Z

Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP: Calibration of Thin Heat Flux Sensors for Building Applications Using ASTM C 1130, May, 293

Zhang, J, Pu, J, Zhang, M, and Qiu, T: Model Tests by Centrifuge of Soil Nail Reinforcements, July, 315

Zhang, M: *see* Zhang, J, Pu, J, Zhang, M, and Qiu, T

Zhou, L and Zhou, X: Proper Selection of the Stiffness of the Disk Spring Pile Cap in Pile Driving, March, 208

Zhou, L, Chen, J, and Zhou, X: On the Recovery Coefficient and Parameter Selection for a New Type of Disk Spring Pile Cap, Nov., 582

Zhou, X: *see* Zhou, L and Zhou, X
see Zhou, L, Chen, J, and Zhou, X
see Zhou, L and Zhou, X
see Zhou, L, Chen, J, and Zhou, X

Journal of Testing and Evaluation
Subject Index
Volume 29, 2001

A

AA6061
A Critical Appraisal of Fracture Toughness Measurements on AA6061 and an Al_2O_3-Particle Reinforced AA6061 Alloy for Various Heat Treatments (van Gorp, AC, Mussert, KM, Janssen, M, Bakker, A, and van der Zwaag, S), March, 146

Acoustoelasticity
Ultrasonic Technique for Experimental Evaluation of Structural Integrity (Vangi, D), May, 301

Adhesive
Evaluation and Adjustments for ASTM D 5656 Standard Test Method for Thick-Adherend Metal Lap-Shear Joints for Determination of the Stress-Strain Behavior of Adhesives in Shear by Tension Loading (Yang, C, Huang, H, Tomblin, JS, and Oplinger, DW), Jan., 36

Adhesive shear modulus
Evaluation and Adjustments for ASTM D 5656 Standard Test Method for Thick-Adherend Metal Lap-Shear Joints for Determination of the Stress-Strain Behavior of Adhesives in Shear by Tension Loading (Yang, C, Huang, H, Tomblin, JS, and Oplinger, DW), Jan., 36

Adhesive technology
A Powerful New Tool for Testing Adhesives In Situ (Gegner, J and Öchsner, A), March, 155

Adhesive testing
Evaluation and Adjustments for ASTM D 5656 Standard Test Method for Thick-Adherend Metal Lap-Shear Joints for Determination of the Stress-Strain Behavior of Adhesives in Shear by Tension Loading (Yang, C, Huang, H, Tomblin, JS, and Oplinger, DW), Jan., 36

Aggregate-asphalt combinations
Superpave Shear Tester as a Simple Standardized Measure to Evaluate Aggregate-Asphalt Mixture Performance (Shenoy, A and Romero, P), Sept., 472

Aluminum
The Determination of the In-Plane Shear Characteristics of Aluminum Alloys (Gilmour, KR, Leacock, AG, and Ashbridge, MJ), March, 131

Aluminum nitride
The Effects of Residual Stress, Loading, and Crack Geometry on SEPB Fracture Toughness Test Results (Grendahl, S, Bert, R, Cho, K, and Bar-On, I), May, 271

AMES Network
The AMES Network Strategy Developments in the 5th Euratom Framework Program (Sevini, F, Debarberis, L, Törrönen, K, and Davies, LM), May, 306

Anaerobic adhesives
A Powerful New Tool for Testing Adhesives In Situ (Gegner, J and Öchsner, A), March, 155

Anisotropy
The Determination of the In-Plane Shear Characteristics of Aluminum Alloys (Gilmour, KR, Leacock, AG, and Ashbridge, MJ), March, 131

Asphalt pavements
A Performance Evaluation of Lightweight Non-Contact Pavement Profilers (Hand, AJ, Mondal, AK, and Ward, DR), March, 161

Attributes
Comparison of the Systems Approach and the Nordic Model and their Melded Application in the Development of Performance-Based Building Codes and Standards (Hattis, DB and Becker, R), July, 413

Axisymmetric compression testing
Accurate Measurement of Flow Stress Curves at High Temperatures for Low Strain Ranges (Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM), Nov., 520

B

Ballistic evaluation
A Screening Method for Ballistic Evaluation of Metallic Armor Materials (Singh, BB and Bhat, TB), Sept., 509

Ballistic limit
A Screening Method for Ballistic Evaluation of Metallic Armor Materials (Singh, BB and Bhat, TB), Sept., 509

Bituminous mixture
Development of New Low-Cost Indirect Tensile Test Equipment for Bituminous Mixtures (Tigdemir, M, Karashin, M, and Kalyoncuoglu, SF), July, 387

Black cotton soil
California Bearing Ratio Behavior of Soil/Fly Ash Mixtures (Pandian, NS, Krishna, KC, and Sridharan, A), March, 220

Bolted joints
Service Temperature Characterization of Polytetrafluoroethylene-Based Gaskets (Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR), Sept., 442

Boxes
Packaging Specifications for Corrugated Boxes with Heavy Flowable Products in Single Parcel Shipments (Singh, SP, Burgess, G, Pratheepthinthong, S, and Singh, J), Nov., 570

Bridge indentation
A Finite Element Analysis of the Stress Intensity Resulting from Single-Edge Precracked Beam Loading Conditions (Turner, D and Kibble, KA), May, 285

Building technology
Calibration of Thin Heat Flux Sensors for Building Applications Using ASTM C 1130 (Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP), May, 293

Bulge test
Sensitivity Analysis of the Small Specimen Bulge Test by the Finite Element and the Taguchi Methods (Li, W, Hellen, TK, Brookfield, DJ, Mottershead, JE, and Whelan, M), May, 277

C

C(TS) specimen
J-Integral Evaluation of Single-Edge Notched Specimens under Mixed-Mode I/II Loading (Dalle Donne, C and Pirondi, A), May, 239

Calibration
Calibration of Thin Heat Flux Sensors for Building Applications Using ASTM C

© 2001 by the American Society for Testing and Materials

1130 (Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP), May, 293

Calibration functions
The Calibration Functions of the Arc-Shaped Bend Specimen (Donoso, JR, Basáez, F, and Landes, JD), July, 393

California bearing ratio
California Bearing Ratio Behavior of Soil/Fly Ash Mixtures (Pandian, NS, Krishna, KC, and Sridharan, A), March, 220

Casting
Geometry of Solidification. I: Shrinkage Criterion Using Results from Finite Element Analysis (Windelberg, D), July, 352

Centrifuge
Model Tests by Centrifuge of Soil Nail Reinforcements (Zhang, J, Pu, J, Zhang, M, and Qiu, T), July, 315

Centrifuge tests
Falling Head Hydraulic Conductivity Tests in a Geotechnical Centrifuge (Singh, DN and Gupta, AK), May, 258

Chain saw
Test Method Using Energy to Evaluate the Cut Resistance of Protective Clothing Against Chain Saws (Turcot, D and Daigle, R), March, 123

Characterization
Characterization and Creation of Defects in Condoms (Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA), March, 214

Charpy V-notch
Expression for the Dynamic Yield Stress from Instrumented Dynamic Tear Specimens and Plastic η-Factor for Three-Point Bend Specimens: Results for AISI 308 Weld and AISI 316 Stainless Steels (Sreenivasan, PR, Ray, SK, and Mannan, SL), Sept., 499

Clamps
Specimen Instrumentation Techniques for Permanent Deformation Testing of Asphalt Mixtures (Kaloush, KE, Mirza, MW, Uzan, J, and Witczak, MW), Sept., 423

Coarse aggregate shape
Quantification of Coarse Aggregate Shape and its Effect on Engineering Properties of Hot-Mix Asphalt Mixtures (Chen, J-S, Shiah, M-S, and Chen, H-J), Nov., 513

Coarse aggregates
Coarse Aggregate Shape and Size Properties Using a New Image Analyzer (Rao, C, Tutumluer, E, and Stefanski, JA), Sept., 461

Compact tension specimens
Notes on Direct Current Potential Drop Calibration for Crack Growth in Compact Tension Specimens (Tong, J), July, 402

Compaction
California Bearing Ratio Behavior of Soil/Fly Ash Mixtures (Pandian, NS, Krishna, KC, and Sridharan, A), March, 220

Condom
Comparison of ISO/FDA and ASTM Condom Water Leak Test Methods (Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF), March, 192

Condoms
Characterization and Creation of Defects in Condoms (Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA), March, 214

Constant-stress creep test
Small Punch Testing in Creep Conditions (Dobeš, F and Milicka, K), Jan., 31

Contact strength
Test Devices for Strength Measurements of Bars Under Contact Loading (Fett, T, Munz, D, and Thun, G), Jan., 1

Crack tip
Determination of the Energy Necessary for Creating Fatigue Cracks by Measurement of Microhardness (Benguediab, M, Mazari, M, and Ranganathan, N), Sept., 492

Creep
Service Temperature Characterization of Polytetrafluoroethylene-Based Gaskets (Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR), Sept., 442

Creep strength
Evaluation of the Elevated Temperature Creep Strength of Three Lead-Free Solder Alloys in Soldered Joints (Shepherd, D, Hagwood, C, and Fields, R), July, 380

Criteria
Comparison of the Systems Approach and the Nordic Model and their Melded Application in the Development of Performance-Based Building Codes and Standards (Hattis, DB and Becker, R), July, 413

Criterion
Geometry of Solidification. I: Shrinkage Criterion Using Results from Finite Element Analysis (Windelberg, D), July, 352

Cyclic loading
Yield Strength in Relation to Cyclic Loading (Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M), Nov., 529

Cyclic stress-strain curve
Yield Strength in Relation to Cyclic Loading (Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M), Nov., 529

Cyclic yield strength
Yield Strength in Relation to Cyclic Loading (Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M), Nov., 529

D

Damage
Static and Dynamic Behavior of Damaged Concrete and Granite in Compression (Gomez, JT and Shukla, A), Nov., 563

Defect creation
Characterization and Creation of Defects in Condoms (Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA), March, 214

Defects
Characterization and Creation of Defects in Condoms (Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA), March, 214
Comparison of ISO/FDA and ASTM Condom Water Leak Test Methods (Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF), March, 192

Delamination growth
A Finite Element Investigation into the Effect of a Skew Insert in a Double-Cantilever Beam Specimen on Calculating Mode I Delamination Fracture Energy of Unidirectional Composites (Javidrad, F and Mashadi, MM), March, 199

Direct current potential drop
Notes on Direct Current Potential Drop Calibration for Crack Growth in Compact Tension Specimens (Tong, J), July, 402

Direct measurment of load-line displacement
Direct Measurement of Displacement in Instrumented Charpy Impact Testing for Structural Integrity Assessment (Tronskar, JP, Mannan, MA, and Lai, MO), May, 246

Disk spring pile cap
On the Recovery Coefficient and Parameter Selection for a New Type of Disk Spring Pile Cap (Zhou, L, Chen, J, and Zhou, X), Nov., 582
Proper Selection of the Stiffness of the Disk Spring Pile Cap in Pile Driving (Zhou, L and Zhou, X), March, 208

Dislocations
Low and High Cycle Fatigue Interaction in 316L Stainless Steel (Wong, YK, Hu, XZ, and Norton, MP), March, 138

Distributions
A New Multiparameter Approach to the Prediction of Wear Rates in Agricultural Sprayer Nozzles (Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO), July, 372

Double aperture method
Determination and Calculational Minimization of the Nonlinearity of a Vis-NIR-Spectrophotometer Using the Double Aperture Method (Ossadnik, S, Naundorf, G, and Schwedt, G), July, 407

Drinking water analytical methods
Method-Specific Precision and Bias Relationships Developed from Data Submitted During USEPA Drinking Water Laboratory Performance Evaluation Studies (Britton, PW), Jan., 79

Ductile fracture
J-Integral Evaluation of Single-Edge Notched Specimens under Mixed-Mode I/II Loading (Dalle Donne, C and Pirondi, A), May, 239

Dynamic compressive strength
Static and Dynamic Behavior of Damaged Concrete and Granite in Compression (Gomez, JT and Shukla, A), Nov., 563

Dynamic cone penetrometer
Homogeneous Unit Delineation for Interpreting Dynamic Cone Penetrometer Measurements (Divinsky, M and Livneh, M), Sept., 503

Dynamic fracture
Analysis of a High Rate Round Robin Based on Proposed Annexes to ASTM E 1820 (Joyce, JA), July, 329

Dynamic yield stress
Expression for the Dynamic Yield Stress from Instrumented Dynamic Tear Specimens and Plastic η-Factor for Three-Point Bend Specimens: Results for AISI 308 Weld and AISI 316 Stainless Steels (Sreenivasan, PR, Ray, SK, and Mannan, SL), Sept., 499

E

E-commerce
Measurement and Analysis of the United Parcel Service Ground Shipping Environment for Large and Heavy Packages (Singh, SP, Burgess, GJ, and Hays, ZG), Jan., 11

Elastic-plastic fracture
Analysis of a High Rate Round Robin Based on Proposed Annexes to ASTM E 1820 (Joyce, JA), July, 329
The Calibration Functions of the Arc-Shaped Bend Specimen (Donoso, JR, Basáez, F, and Landes, JD), July, 393

Embedment property
Empirical Models Depicting Grain Angle Effects on Load-Embedment Response of Dowel-Type Fasteners in Wood (Li, Y and Chui, YH), May, 264

Energy dissipation
Determination of the Energy Necessary for Creating Fatigue Cracks by Measurement of Microhardness (Benguediab, M, Mazari, M, and Ranganathan, N), Sept., 492

Experimental device
An Instrumented Microindentation Testing Device (ÖBerg, H, Larsson, P-L, and Magnius, O), Jan., 50

F

Falling-head tests
Falling Head Hydraulic Conductivity Tests in a Geotechnical Centrifuge (Singh, DN and Gupta, AK), May, 258

Fatigue
Yield Strength in Relation to Cyclic Loading (Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M), Nov., 529

Finite element
A Finite Element Investigation into the Effect of a Skew Insert in a Double-Cantilever Beam Specimen on Calculating Mode I Delamination Fracture Energy of Unidirectional Composites (Javidrad, F and Mashadi, MM), March, 199

Finite element analysis
A Powerful New Tool for Testing Adhesives In Situ (Gegner, J and Öchsner, A), March, 155
On Experimental *J* Estimation Equations Based on CMOD for SE(B) Specimens (Kim, Y-J and Schwalbe, K-H), Jan., 67
On the Sensitivity of *J* Estimation to Materials' Stress-Strain Curves in Fracture Toughness Testing Using the Finite Element Method (Kim, Y-J and Schwalbe, K-H), Jan., 18
Sensitivity Analysis of the Small Specimen Bulge Test by the Finite Element and the Taguchi Methods (Li, W, Hellen, TK, Brookfield, DJ, Mottershead, JE, and Whelan, M), May, 277

Finite-element analysis
Geometry of Solidification. I: Shrinkage Criterion Using Results from Finite Element Analysis (Windelberg, D), July, 352

Fly ash
California Bearing Ratio Behavior of Soil/Fly Ash Mixtures (Pandian, NS, Krishna, KC, and Sridharan, A), March, 220

Footings
Formation of Shear Bands in Model Ground Composed of Aluminum Rods Beneath a Footing (Yoshida, N, Bettou, T, and Wakita, M), May, 229

Foundation structures
Formation of Shear Bands in Model Ground Composed of Aluminum Rods Beneath a Footing (Yoshida, N, Bettou, T, and Wakita, M), May, 229

Fracture mechanics
Analysis of a High Rate Round Robin Based on Proposed Annexes to ASTM E 1820 (Joyce, JA), July, 329

Fracture of PVC pipe
Weathering Effects on the Fracture Properties of Polyvinyl Chloride Pipes (Ragab, AR and Alawi, H), Jan., 44

Fracture toughness
A Critical Appraisal of Fracture Toughness Measurements on AA6061 and an Al_2O_3-Particle Reinforced AA6061 Alloy for Various Heat Treatments (van Gorp, AC, Mussert, KM, Janssen, M, Bakker, A, and van der Zwaag, S), March, 146
The Effects of Residual Stress, Loading, and Crack Geometry on SEPB Fracture Toughness Test Results (Grendahl, S, Bert, R, Cho, K, and Bar-On, I), May, 271

Fracture toughness testing
A Finite Element Analysis of the Stress Intensity Resulting from Single-Edge Precracked Beam Loading Conditions (Turner, D and Kibble, KA), May, 285

Frequency sweep
Superpave Shear Tester as a Simple Standardized Measure to Evaluate Aggregate-Asphalt Mixture Performance (Shenoy, A and Romero, P), Sept., 472

Fuzzy logic
Development of New Low-Cost Indirect Tensile Test Equipment for Bituminous Mixtures (Tigdemir, M, Karashin, M, and Kalyoncuoglu, SF), July, 387

G

Geomechanics
Displacement and Strain Fields at a Stone/Mortar Interface by Digital Image Processing (Raffard, D, Ienny, P, and Henry, JP), March, 115

Global energy
Determination of the Energy Necessary for Creating Fatigue Cracks by Measurement of Microhardness (Benguediab, M, Mazari, M, and Ranganathan, N), Sept., 492

Global method
Determination of the Energy Necessary for Creating Fatigue Cracks by Measurement of Microhardness (Benguediab, M, Mazari, M, and Ranganathan, N), Sept., 492

Guarded hot plate
Calibration of Thin Heat Flux Sensors for Building Applications Using ASTM C 1130 (Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP), May, 293

H

Health care workers
Evaluation of Powdered Latex Medical Gloves Using ASTM D 6124-00 (Chaput, MP and Margolin, AB), Nov., 579

Heat flow meter
Calibration of Thin Heat Flux Sensors for Building Applications Using ASTM C 1130 (Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP), May, 293

Heat flux sensor
Calibration of Thin Heat Flux Sensors for Building Applications Using ASTM C

1130 (Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP), May, 293

Heavy metal retention
Heavy Metal Retention Behavior of Clayey Soils (Pandian, NS, Sridharan, A, and Rajasekhar, C), July, 361

Heavy products
Packaging Specifications for Corrugated Boxes with Heavy Flowable Products in Single Parcel Shipments (Singh, SP, Burgess, G, Pratheepthinthong, S, and Singh, J), Nov., 570

High temperature
Accurate Measurement of Flow Stress Curves at High Temperatures for Low Strain Ranges (Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM), Nov., 520

Homogeneous units
Homogeneous Unit Delineation for Interpreting Dynamic Cone Penetrometer Measurements (Divinsky, M and Livneh, M), Sept., 503

Homogenization
Displacement and Strain Fields at a Stone/Mortar Interface by Digital Image Processing (Raffard, D, Ienny, P, and Henry, JP), March, 115

Hot-mix asphalt extractions
Use of *n*-Propyl Bromide Solvents for Extraction and Recovery of Asphalt Cements (Stroup-Gardiner, M and Nelson, JW), Sept., 432

Hot-mix asphalt mixtures
Quantification of Coarse Aggregate Shape and its Effect on Engineering Properties of Hot-Mix Asphalt Mixtures (Chen, J-S, Shiah, M-S, and Chen, H-J), Nov., 513

Hydraulic conductivity
Falling Head Hydraulic Conductivity Tests in a Geotechnical Centrifuge (Singh, DN and Gupta, AK), May, 258

I

Image analysis
Coarse Aggregate Shape and Size Properties Using a New Image Analyzer (Rao, C, Tutumluer, E, and Stefanski, JA), Sept., 461

Indentation depth
An Instrumented Microindentation Testing Device (ÖBerg, H, Larsson, P-L, and Magnius, O), Jan., 50

Indirect tensile
Development of New Low-Cost Indirect Tensile Test Equipment for Bituminous Mixtures (Tigdemir, M, Karashin, M, and Kalyoncuoglu, SF), July, 387

Instrumentation and preparation techniques
Specimen Instrumentation Techniques for Permanent Deformation Testing of Asphalt Mixtures (Kaloush, KE, Mirza, MW, Uzan, J, and Witczak, MW), Sept., 423

Instrumented dynamic tear test
Expression for the Dynamic Yield Stress from Instrumented Dynamic Tear Specimens and Plastic η-Factor for Three-Point Bend Specimens: Results for AISI 308 Weld and AISI 316 Stainless Steels (Sreenivasan, PR, Ray, SK, and Mannan, SL), Sept., 499

Instrumented impact test
Expression for the Dynamic Yield Stress from Instrumented Dynamic Tear Specimens and Plastic η-Factor for Three-Point Bend Specimens: Results for AISI 308 Weld and AISI 316 Stainless Steels (Sreenivasan, PR, Ray, SK, and Mannan, SL), Sept., 499

Instrumented impact testing
Direct Measurement of Displacement in Instrumented Charpy Impact Testing for Structural Integrity Assessment (Tronskar, JP, Mannan, MA, and Lai, MO), May, 246

Interlaboratory studies
Method-Specific Precision and Bias Relationships Developed from Data Submitted During USEPA Drinking Water Laboratory Performance Evaluation Studies (Britton, PW), Jan., 79

International Roughness Index
A Performance Evaluation of Lightweight Non-Contact Pavement Profilers (Hand, AJ, Mondal, AK, and Ward, DR), March, 161

Ion exchange
Heavy Metal Retention Behavior of Clayey Soils (Pandian, NS, Sridharan, A, and Rajasekhar, C), July, 361

Iosipescu
Stress Pattern Analysis by Thermal Emission of Plain Weave Carbon Fiber/Epoxy Resin Composite Iosipescu Specimens with Three Different Notch Angles (Osborne, MC and Moran, AL), Sept., 453

Irradiation embrittlement
The AMES Network Strategy Developments in the 5th Euratom Framework Program (Sevini, F, Debarberis, L, Törrönen, K, and Davies, LM), May, 306

J

***J*-integral**
J-Integral Evaluation of Single-Edge Notched Specimens under Mixed-Mode I/II Loading (Dalle Donne, C and Pirondi, A), May, 239
Analysis of a High Rate Round Robin Based on Proposed Annexes to ASTM E 1820 (Joyce, JA), July, 329
On Experimental *J* Estimation Equations Based on CMOD for SE(B) Specimens (Kim, Y-J and Schwalbe, K-H), Jan., 67
On the Sensitivity of *J* Estimation to Materials' Stress-Strain Curves in Fracture Toughness Testing Using the Finite Element Method (Kim, Y-J and Schwalbe, K-H), Jan., 18

K

KGR-1 device
Evaluation and Adjustments for ASTM D 5656 Standard Test Method for Thick-Adherend Metal Lap-Shear Joints for Determination of the Stress-Strain Behavior of Adhesives in Shear by Tension Loading (Yang, C, Huang, H, Tomblin, JS, and Oplinger, DW), Jan., 36

L

Latex
Characterization and Creation of Defects in Condoms (Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA), March, 214

Latex allergy
Evaluation of Powdered Latex Medical Gloves Using ASTM D 6124-00 (Chaput, MP and Margolin, AB), Nov., 579

Lead-free solder
Evaluation of the Elevated Temperature Creep Strength of Three Lead-Free Solder Alloys in Soldered Joints (Shepherd, D, Hagwood, C, and Fields, R), July, 380

Lightweight non-contact profiler
A Performance Evaluation of Lightweight Non-Contact Pavement Profilers (Hand, AJ, Mondal, AK, and Ward, DR), March, 161

Limit analysis
On Experimental *J* Estimation Equations Based on CMOD for SE(B) Specimens (Kim, Y-J and Schwalbe, K-H), Jan., 67

Linear regression
Overcoming Multicollinearity in Near Infrared Analysis for Lycopene Content Estimation in Tomatoes by Using Ridge Regression (Pasternak, H, Schmilovitch, Z, Fallik, E, and Edan, Y), Jan., 60

Load
Laboratory and Field Evaluation of Piezoelectric Wegh-In Motion Sensors (Papagiannakis, AT, Johnston, EC, Alavi, SH, and Mactutis, JA), Nov., 535

Load ratio
Yield Strength in Relation to Cyclic Loading (Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M), Nov., 529

Local energy
Determination of the Energy Necessary for Creating Fatigue Cracks by Measurement of Microhardness (Benguediab, M, Mazari, M, and Ranganathan, N), Sept., 492

Local method
Determination of the Energy Necessary for Creating Fatigue Cracks by Measurement of Microhardness (Benguediab, M, Mazari, M, and Ranganathan, N), Sept., 492

Log-normal
A New Multiparameter Approach to the Prediction of Wear Rates in Agricultural Sprayer Nozzles (Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO), July, 372

Low and high cycle fatigue interaction
Low and High Cycle Fatigue Interaction in 316L Stainless Steel (Wong, YK, Hu, XZ, and Norton, MP), March, 138

M

Metal fatigue
Low and High Cycle Fatigue Interaction in 316L Stainless Steel (Wong, YK, Hu, XZ, and Norton, MP), March, 138

Metal matrix composites
A Critical Appraisal of Fracture Toughness Measurements on AA6061 and an Al_2O_3-Particle Reinforced AA6061 Alloy for Various Heat Treatments (van Gorp, AC, Mussert, KM, Janssen, M, Bakker, A, and van der Zwaag, S), March, 146

Microindentation
An Instrumented Microindentation Testing Device (ÖBerg, H, Larsson, P-L, and Magnius, O), Jan., 50

Mixed mode
J-Integral Evaluation of Single-Edge Notched Specimens under Mixed-Mode I/II Loading (Dalle Donne, C and Pirondi, A), May, 239

Mode I delamination
A Finite Element Investigation into the Effect of a Skew Insert in a Double-Cantilever Beam Specimen on Calculating Mode I Delamination Fracture Energy of Unidirectional Composites (Javidrad, F and Mashadi, MM), March, 199

Models
A New Multiparameter Approach to the Prediction of Wear Rates in Agricultural Sprayer Nozzles (Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO), July, 372

Multiaxiality
Test Devices for Strength Measurements of Bars Under Contact Loading (Fett, T, Munz, D, and Thun, G), Jan., 1

Multicollinearity
Overcoming Multicollinearity in Near Infrared Analysis for Lycopene Content Estimation in Tomatoes by Using Ridge Regression (Pasternak, H, Schmilovitch, Z, Fallik, E, and Edan, Y), Jan., 60

N

Natural weathering of PVC
Weathering Effects on the Fracture Properties of Polyvinyl Chloride Pipes (Ragab, AR and Alawi, H), Jan., 44

Near infrared spectroscopy
Overcoming Multicollinearity in Near Infrared Analysis for Lycopene Content Estimation in Tomatoes by Using Ridge Regression (Pasternak, H, Schmilovitch, Z, Fallik, E, and Edan, Y), Jan., 60

Nondestructive testing
The AMES Network Strategy Developments in the 5th Euratom Framework Program (Sevini, F, Debarberis, L, Törrönen, K, and Davies, LM), May, 306

Normal
A New Multiparameter Approach to the Prediction of Wear Rates in Agricultural Sprayer Nozzles (Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO), July, 372

Normalization method
Analysis of a High Rate Round Robin Based on Proposed Annexes to ASTM E 1820 (Joyce, JA), July, 329

Nozzle
A New Multiparameter Approach to the Prediction of Wear Rates in Agricultural Sprayer Nozzles (Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO), July, 372

***N*-propyl bromide**
Use of *n*-Propyl Bromide Solvents for Extraction and Recovery of Asphalt Cements (Stroup-Gardiner, M and Nelson, JW), Sept., 432

O

Objectives
Comparison of the Systems Approach and the Nordic Model and their Melded Application in the Development of Performance-Based Building Codes and Standards (Hattis, DB and Becker, R), July, 413

Optical extensometer
Displacement and Strain Fields at a Stone/Mortar Interface by Digital Image Processing (Raffard, D, Ienny, P, and Henry, JP), March, 115

Optimization
Proper Selection of the Stiffness of the Disk Spring Pile Cap in Pile Driving (Zhou, L and Zhou, X), March, 208

P

Package
Packaging Specifications for Corrugated Boxes with Heavy Flowable Products in Single Parcel Shipments (Singh, SP, Burgess, G, Pratheepthinthong, S, and Singh, J), Nov., 570

Packaging
Measurement and Analysis of the United Parcel Service Ground Shipping Environment for Large and Heavy Packages (Singh, SP, Burgess, GJ, and Hays, ZG), Jan., 11

Paper
A New Method for Testing the Abrasive Properties of Paper and other Sheet Metals (Srinivasan, R and Puttaswamygowda, G), Jan., 72

Pavement structure evaluation
Homogeneous Unit Delineation for Interpreting Dynamic Cone Penetrometer Measurements (Divinsky, M and Livneh, M), Sept., 503

Paving materials
Quantification of Coarse Aggregate Shape and its Effect on Engineering Properties of Hot-Mix Asphalt Mixtures (Chen, J-S, Shiah, M-S, and Chen, H-J), Nov., 513

Performance statements
Comparison of the Systems Approach and the Nordic Model and their Melded Application in the Development of Performance-Based Building Codes and Standards (Hattis, DB and Becker, R), July, 413

Performance-related specifications
Superpave Shear Tester as a Simple Standardized Measure to Evaluate Aggregate-Asphalt Mixture Performance (Shenoy, A and Romero, P), Sept., 472

Permanent deformation testing
Specimen Instrumentation Techniques for Permanent Deformation Testing of Asphalt Mixtures (Kaloush, KE, Mirza, MW, Uzan, J, and Witczak, MW), Sept., 423

Photometric accuracy
Determination and Calculational Minimization of the Nonlinearity of a Vis-NIR-Spectrophotometer Using the Double Aperture Method (Ossadnik, S, Naundorf, G, and Schwedt, G), July, 407

Piezoelectric
Laboratory and Field Evaluation of Piezoelectric Wegh-In Motion Sensors (Papagiannakis, AT, Johnston, EC, Alavi, SH, and Mactutis, JA), Nov., 535

Pile driving
On the Recovery Coefficient and Parameter Selection for a New Type of Disk Spring Pile Cap (Zhou, L, Chen, J, and Zhou, X), Nov., 582
Proper Selection of the Stiffness of the Disk Spring Pile Cap in Pile Driving (Zhou, L and Zhou, X), March, 208

Pipe joint static loading behavior
Static Axial Behavior of Some Typical Restrained Pipe Joints (Meis, R, Maragakis, M, and Siddharthan, R), Sept., 485

Pipe joint stiffness
Static Axial Behavior of Some Typical Restrained Pipe Joints (Meis, R, Maragakis, M, and Siddharthan, R), Sept., 485

Pipe joint testing
Static Axial Behavior of Some Typical Restrained Pipe Joints (Meis, R, Maragakis, M, and Siddharthan, R), Sept., 485

Pipe joint testing methodology
Static Axial Behavior of Some Typical Restrained Pipe Joints (Meis, R, Maragakis, M, and Siddharthan, R), Sept., 485

Plane strain compression testing
Accurate Measurement of Flow Stress Curves at High Temperatures for Low Strain Ranges (Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM), Nov., 520

Plastic flow
Formation of Shear Bands in Model Ground Composed of Aluminum Rods Beneath a Footing (Yoshida, N, Bettou, T, and Wakita, M), May, 229

Plastic η-factor
Expression for the Dynamic Yield Stress from Instrumented Dynamic Tear Specimens and Plastic η-Factor for Three-Point Bend Specimens: Results for AISI 308 Weld and AISI 316 Stainless Steels (Sreenivasan, PR, Ray, SK, and Mannan, SL), Sept., 499

Plastic zone
Determination of the Energy Necessary for Creating Fatigue Cracks by Measurement of Microhardness (Benguediab, M, Mazari, M, and Ranganathan, N), Sept., 492

Polytetrafluoroethylene (PTFE) grafts
Service Temperature Characterization of Polytetrafluoroethylene-Based Gaskets (Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR), Sept., 442

Polyvinyl chloride
Weathering Effects on the Fracture Properties of Polyvinyl Chloride Pipes (Ragab, AR and Alawi, H), Jan., 44

Portland cement concrete pavements
A Performance Evaluation of Lightweight Non-Contact Pavement Profilers (Hand, AJ, Mondal, AK, and Ward, DR), March, 161

Powdered medical gloves
Evaluation of Powdered Latex Medical Gloves Using ASTM D 6124-00 (Chaput, MP and Margolin, AB), Nov., 579

Power density spectrum
Effects of Recording Parameters on Power Density Spectra in Transport Vibration Measurement (Singh, SP and Sittipod, S), March, 173

Profile Index
A Performance Evaluation of Lightweight Non-Contact Pavement Profilers (Hand, AJ, Mondal, AK, and Ward, DR), March, 161

Protective clothing
Test Method Using Energy to Evaluate the Cut Resistance of Protective Clothing Against Chain Saws (Turcot, D and Daigle, R), March, 123

R

Raw signal
Laboratory and Field Evaluation of Piezoelectric Wegh-In Motion Sensors (Papagiannakis, AT, Johnston, EC, Alavi, SH, and Mactutis, JA), Nov., 535

Recovery coefficient
On the Recovery Coefficient and Parameter Selection for a New Type of Disk Spring Pile Cap (Zhou, L, Chen, J, and Zhou, X), Nov., 582

Reference potential leads
Notes on Direct Current Potential Drop Calibration for Crack Growth in Compact Tension Specimens (Tong, J), July, 402

Reinforcement
Model Tests by Centrifuge of Soil Nail Reinforcements (Zhang, J, Pu, J, Zhang, M, and Qiu, T), July, 315

Relaxation
Service Temperature Characterization of Polytetrafluoroethylene-Based Gaskets (Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR), Sept., 442

Repeatability
Calibration of Thin Heat Flux Sensors for Building Applications Using ASTM C 1130 (Zarr, RR, Martinez-Fuentes, V, Filliben, JJ, and Dougherty, BP), May, 293

Repeated loading
Development of New Low-Cost Indirect Tensile Test Equipment for Bituminous Mixtures (Tigdemir, M, Karashin, M, and Kalyoncuoglu, SF), July, 387

Reserve temperature
Service Temperature Characterization of Polytetrafluoroethylene-Based Gaskets (Bouzid, A-H, Derenne, M, Marchand, L, and Payne, JR), Sept., 442

Residual stress
The Effects of Residual Stress, Loading, and Crack Geometry on SEPB Fracture Toughness Test Results (Grendahl, S, Bert, R, Cho, K, and Bar-On, I), May, 271

Ridge regression
Overcoming Multicollinearity in Near Infrared Analysis for Lycopene Content Estimation in Tomatoes by Using Ridge Regression (Pasternak, H, Schmilovitch, Z, Fallik, E, and Edan, Y), Jan., 60

S

Saturated soil
Application of a Geotechnical Centrifuge for Estimation of Unsaturated Soil Hydraulic Conductivity (Singh, DN, Kuriyan, SJ, and Madhuri, V), Nov., 556
Nondestructive Evaluation of Fatigue and Creep-Fatigue Damage in 12%Cr Stainless Steel by the Induced Current Focusing Potential Drop Technique (Singh, DN, Kuriyan, SJ, and Madhuri, V), Nov., 544

Sensitivity analysis
Sensitivity Analysis of the Small Specimen Bulge Test by the Finite Element and the Taguchi Methods (Li, W, Hellen, TK, Brookfield, DJ, Mottershead, JE, and Whelan, M), May, 277

SEPB
A Finite Element Analysis of the Stress Intensity Resulting from Single-Edge Precracked Beam Loading Conditions (Turner, D and Kibble, KA), May, 285

Shape
Coarse Aggregate Shape and Size Properties Using a New Image Analyzer (Rao, C, Tutumluer, E, and Stefanski, JA), Sept., 461

Shear bands
Formation of Shear Bands in Model Ground Composed of Aluminum Rods Beneath a Footing (Yoshida, N, Bettou, T, and Wakita, M), May, 229

Sheet material
A New Method for Testing the Abrasive Properties of Paper and other Sheet Metals (Srinivasan, R and Puttaswamygowda, G), Jan., 72

Silty soil
Application of a Geotechnical Centrifuge for Estimation of Unsaturated Soil Hydraulic Conductivity (Singh, DN, Kuriyan, SJ, and Madhuri, V), Nov., 556
Nondestructive Evaluation of Fatigue and Creep-Fatigue Damage in 12%Cr Stainless Steel by the Induced Current Focusing Potential Drop Technique (Singh, DN, Kuriyan, SJ, and Madhuri, V), Nov., 544

Simple shear
The Determination of the In-Plane Shear Characteristics of Aluminum Alloys (Gilmour, KR, Leacock, AG, and Ashbridge, MJ), March, 131

Single-lap joints
A Powerful New Tool for Testing Adhesives In Situ (Gegner, J and Öchsner, A), March, 155

Size
Coarse Aggregate Shape and Size Properties Using a New Image Analyzer (Rao, C, Tutumluer, E, and Stefanski, JA), Sept., 461

Skew delamination front
A Finite Element Investigation into the Effect of a Skew Insert in a Double-Cantilever Beam Specimen on Calculating Mode I Delamination Fracture Energy of Unidirectional Composites (Javidrad, F and Mashadi, MM), March, 199

Small punch test
Small Punch Testing in Creep Conditions (Dobeš, F and Milicka, K), Jan., 31

Small strain
Accurate Measurement of Flow Stress Curves at High Temperatures for Low Strain Ranges (Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM), Nov., 520

Soil nail
Model Tests by Centrifuge of Soil Nail Reinforcements (Zhang, J, Pu, J, Zhang, M, and Qiu, T), July, 315

Solidification
Geometry of Solidification. I: Shrinkage Criterion Using Results from Finite Element Analysis (Windelberg, D), July, 352

Spring stiffness
Proper Selection of the Stiffness of the Disk Spring Pile Cap in Pile Driving (Zhou, L and Zhou, X), March, 208

Static compressive strength
Static and Dynamic Behavior of Damaged Concrete and Granite in Compression (Gomez, JT and Shukla, A), Nov., 563

Statistical relationships
Method-Specific Precision and Bias Relationships Developed from Data Submitted During USEPA Drinking Water Laboratory Performance Evaluation Studies (Britton, PW), Jan., 79

Steady-state hardness
An Instrumented Microindentation Testing Device (ÖBerg, H, Larsson, P-L, and Magnius, O), Jan., 50

Steel
Direct Measurement of Displacement in Instrumented Charpy Impact Testing for Structural Integrity Assessment (Tronskar, JP, Mannan, MA, and Lai, MO), May, 246

Stone masonry
Displacement and Strain Fields at a Stone/Mortar Interface by Digital Image Processing (Raffard, D, Ienny, P, and Henry, JP), March, 115

Stress intensity factor
Ultrasonic Technique for Experimental Evaluation of Structural Integrity (Vangi, D), May, 301

Stress pattern analysis by thermal emission (SPATE)
Stress Pattern Analysis by Thermal Emission of Plain Weave Carbon Fiber/Epoxy Resin Composite Iosipescu Specimens with Three Different Notch Angles (Osborne, MC and Moran, AL), Sept., 453

Stress rupture
Evaluation of the Elevated Temperature Creep Strength of Three Lead-Free Solder Alloys in Soldered Joints (Shepherd, D, Hagwood, C, and Fields, R), July, 380

Structural integrity
Ultrasonic Technique for Experimental Evaluation of Structural Integrity (Vangi, D), May, 301

Superpave shear tester
Superpave Shear Tester as a Simple Standardized Measure to Evaluate Aggregate-Asphalt Mixture Performance (Shenoy, A and Romero, P), Sept., 472

Synthetic
Characterization and Creation of Defects in Condoms (Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA), March, 214

T

Tapered plate
A Screening Method for Ballistic Evaluation of Metallic Armor Materials (Singh, BB and Bhat, TB), Sept., 509

Tensile testing
Accurate Measurement of Flow Stress Curves at High Temperatures for Low Strain Ranges (Carmona, R, Lacey, AJ, Beynon, JH, and Sellars, CM), Nov., 520

Tensile-shear test
A Powerful New Tool for Testing Adhesives In Situ (Gegner, J and Öchsner, A), March, 155

Test method
Test Method Using Energy to Evaluate the Cut Resistance of Protective Clothing Against Chain Saws (Turcot, D and Daigle, R), March, 123

Testing characteristics
Homogeneous Unit Delineation for Interpreting Dynamic Cone Penetrometer Measurements (Divinsky, M and Livneh, M), Sept., 503

Three-point bend
Expression for the Dynamic Yield Stress from Instrumented Dynamic Tear Specimens and Plastic η-Factor for Three-Point Bend Specimens: Results for AISI 308 Weld and AISI 316 Stainless Steels (Sreenivasan, PR, Ray, SK, and Mannan, SL), Sept., 499

Timber joints
Empirical Models Depicting Grain Angle Effects on Load-Embedment Response of Dowel-Type Fasteners in Wood (Li, Y and Chui, YH), May, 264

Transportation
Effects of Recording Parameters on Power Density Spectra in Transport Vibration Measurement (Singh, SP and Sittipod, S), March, 173

Trichloroethylene
Use of *n*-Propyl Bromide Solvents for Extraction and Recovery of Asphalt Cements (Stroup-Gardiner, M and Nelson, JW), Sept., 432

U

Ultrasonic velocity
Ultrasonic Technique for Experimental Evaluation of Structural Integrity (Vangi, D), May, 301

Unsaturated soil
Application of a Geotechnical Centrifuge for Estimation of Unsaturated Soil Hydraulic Conductivity (Singh, DN, Kuriyan, SJ, and Madhuri, V), Nov., 556
Model Tests by Centrifuge of Soil Nail Reinforcements (Zhang, J, Pu, J, Zhang, M, and Qiu, T), July, 315
Nondestructive Evaluation of Fatigue and Creep-Fatigue Damage in 12%Cr Stainless Steel by the Induced Current Focusing Potential Drop Technique (Singh, DN, Kuriyan, SJ, and Madhuri, V), Nov., 544

User needs
Comparison of the Systems Approach and the Nordic Model and their Melded Application in the Development of Performance-Based Building Codes and Standards (Hattis, DB and Becker, R), July, 413

V

Vibration
Effects of Recording Parameters on Power Density Spectra in Transport Vibration Measurement (Singh, SP and Sittipod, S), March, 173

Video imaging
Coarse Aggregate Shape and Size Properties Using a New Image Analyzer (Rao, C, Tutumluer, E, and Stefanski, JA), Sept., 461

W

Water leak test
Characterization and Creation of Defects in Condoms (Kerr, LN, Chaput, MP, Boyd, SM, Galevi, EA, and Millward, PA), March, 214

Water leak tests
Comparison of ISO/FDA and ASTM Condom Water Leak Test Methods (Kerr, LN, Boivin, WS, Hamilton, SL, Mailhot, SA, O'Malley, LG, Boyd, SM, Pierdominici, Jr., VJB, and Bushar, HF), March, 192

Wear
A New Method for Testing the Abrasive Properties of Paper and other Sheet Metals

(Srinivasan, R and Puttaswamygowda, G), Jan., 72
A New Multiparameter Approach to the Prediction of Wear Rates in Agricultural Sprayer Nozzles (Soboyejo, ABO, Ozkan, HE, Papritan, JC, and Soboyejo, WO), July, 372

Weigh-in motion
Laboratory and Field Evaluation of Piezoelectric Wegh-In Motion Sensors (Papagiannakis, AT, Johnston, EC, Alavi, SH, and Mactutis, JA), Nov., 535

Wood grain angle
Empirical Models Depicting Grain Angle Effects on Load-Embedment Response of Dowel-Type Fasteners in Wood (Li, Y and Chui, YH), May, 264

Woven composite
Stress Pattern Analysis by Thermal Emission of Plain Weave Carbon Fiber/Epoxy Resin Composite Iosipescu Specimens with Three Different Notch Angles (Osborne, MC and Moran, AL), Sept., 453

Y

Yield strength
Yield Strength in Relation to Cyclic Loading (Ichinose, K, Fukuda, K, Gomi, K, Taniuchi, K, and Sano, M), Nov., 529